

IN THE CLAIM

1 1. (Currently Amended) A method for retiring instructions processed through various
2 processing stages, comprising the steps of:
3 for each instruction capable of early retirement and at each stage of the
4 various stages,
5 processing the instruction in accordance with the stage;
6 if the instruction meets the criteria for early retirement, then
7 terminating the instruction; and
8 updating a state of a system processing the instruction to
9 reflect that the instruction has been terminated;
10 wherein the criteria for early retirement is met when at least one of the
11 following conditions is met: continued processing of the instruction
12 does not change the architectural state of the system processing the
13 instruction; continued processing of the instruction has no effect on
14 the behavior of a program running the instruction; the instruction
15 has completed its function without completing its full pipeline.

1 2. (Original) The method of claim 1 further comprises the step of proceeding the
2 instruction to a next stage if the instruction does not meet the criteria for early
3 retirement.

1 3. (Original) The method of claim 1 wherein the various processing stages include one or
2 more of the following stages: fetching, issuing, sorting, executing, queuing, and
3 retiring.

1 4. (Original) The method of claim 1 wherein the each instruction capable of early
2 retirement includes an identification tag for identifying whether the instruction is
3 capable of early retirement.

1 5. (Original) The method of claim 1 wherein NO-OP instructions, pre-fetch instructions,
2 branch instructions, nullified instructions, and predicated-false instructions are
3 identified as instructions capable of early retirement.

1 6. (Canceled) The method of claim 1 wherein the criteria for early retirement are met
2 when continued processing the instruction does not change the architectural state
3 of the system processing the instruction.

1 7. (Canceled) The method of claim 1 wherein the criteria for early retirement are met
2 when continued processing the instruction does not change the behavior of a
3 program running the instruction.

1 8. (Currently Amended) A computer-readable medium embodying instructions that cause
2 a computer to perform a method for retiring instructions processed through various
3 processing stages, the method comprising the steps of:

4 for each instruction capable of early retirement and at each stage of the
5 various stages,

6 processing the instruction in accordance with the each stage;

7 if the instruction meets the criteria for early retirement, then

8 terminating the instruction; and

9 updating a state of a system processing the instruction to

10 reflect that the instruction has been terminated;

11 wherein the criteria for early retirement is met when at least one of the
12 following conditions is met: continued processing of the instruction
13 does not change the architectural state of the system processing the
14 instruction; continued processing of the instruction has no effect on
15 the behavior of a program running the instruction; the instruction
16 has completed its function without completing its full pipeline.

1 9. (Original) The computer-readable medium of claim 8 wherein the method further
2 comprises the step of proceeding the instruction to a next stage if the instruction
3 does not meet the criteria for early retirement.

1 10. (Original) The computer-readable medium of claim 8 wherein the various processing
2 stages include one or more of the following stages: fetching, issuing, sorting,
3 executing, queuing, and retiring.

1 11. (Original) The computer-readable medium of claim 8 wherein the instruction capable
2 of early-retirement includes an identification tag for identifying whether the
3 instruction is capable of early retirement.

1 12. (Original) The computer-readable medium of claim 8 wherein NO-Op instructions,
2 pre-fetch instructions, branch instructions, nullified instructions, and predicated-
3 false instructions are identified as instructions capable of early retirement.

1 13. (Canceled) The computer-readable medium of claim 8 wherein the criteria for early
2 retirement are met when continued processing the instruction does not change the
3 architectural state of the system processing the instruction.

1 14. (Canceled) The computer-readable medium of claim 8 wherein the criteria for early
2 retirement are met when continued processing the instruction does not change the
3 behavior of a program running the instruction.

1 15. (Currently Amended) A system for retiring instructions processed through various
2 processing stages, comprising:
3 for each instruction capable of early retirement and at each stage of the
4 various stages,
5 a first processing unit for processing the instruction in accordance
6 with the stage; and
7 a second processing unit for, if the instruction meets the criteria for
8 early retirement,
9 terminating the instruction; and
10 updating a state of the system to reflect that the instruction
11 has been terminated;
12 wherein the criteria for early retirement is met when at least one of the
13 following conditions is met: continued processing of the instruction
14 does not change the architectural state of the system processing the
15 instruction; continued processing of the instruction has no effect on
16 the behavior of a program running the instruction; the instruction
17 has completed its function without completing its full pipeline.

1 16. (Original) The system of claim 15 further comprises a third processing unit for
2 proceeding the instruction to a next stage if the instruction does not meet the
3 criteria for early retirement.

1 17. (Original) The system of claim 15 wherein the each instruction capable of early
2 retirement includes an identification tag for identifying whether the instruction is
3 capable of early retirement.

1 18. (Original) The system of claim 15 wherein NO-OP instructions, pre-fetch instructions,
2 branch instructions, nullified instructions, and predicated-false instructions are
3 identified as instructions capable of early retirement.

1 19. (Canceled) The system of claim 15 wherein the criteria for early retirement are met
2 when continued processing the instruction does not change the architectural state
3 of the system.

1 20. (Canceled) The system of claim 15 wherein the criteria for early retirement are met
2 when continued processing the instruction does not change the behavior of a
3 program running the instruction.

1 21. (New) The system of claim 15 wherein the various processing stages include one or
2 more of the following stages: fetching, issuing, sorting, executing, queuing, and
3 retiring.